

DISPLAY ELEMENT, DISPLAY DEVICE, AND MICROLENS ARRAY

ABSTRACT OF THE DISCLOSURE

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A display element having a plurality of pixel portions arranged two-dimensionally with a predetermined pixel pitch and a microlens array including a plurality of microlenses arranged two-dimensionally corresponding to the plurality of pixel portions on an incident side or an emission side of light with respect to the pixel portions, wherein, in the microlens array, each microlens has a lens surface of a hyperboloid of revolution, and a lens pitch of the plurality of microlenses is set to a pitch smaller than the lens pitch able to substantially equivalently maintain a converging efficiency of a lens of the hyperboloid of revolution and a lens of an ellipsoid of revolution with respect to the incident light and able to maintain a converging efficiency higher than the converging efficiency of the lens of the ellipsoid of revolution or wherein, in the microlens array, each microlens has a lens surface of a hyperboloid of revolution, and a lens pitch is 20 μm or less; a display device; and a microlens array.